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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/823,793
Filing Date: March 30, 2001
Appellant(s): LEE ET AL.

Mark W. Sincell, Ph.D.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/27/2007 appealing from the Office action mailed 4/06/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

> The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

The brief is deficient because the summary mischaracterizes at page 3 lines 15-16 of the Brief the foveation point. In view of the specification at page 6 lines 1 and 2 and figures 1 and 1a the sentence should be: Embodiments of the method include defining

a foveated area in the video image, a foveation point is within the foveation area. Additionally the sentence spanning pages 3 and 4 of the Brief should also refer to page 5 lines 4-7 of the specification which discusses determining the foveation area 12 in the image10 by visually detecting a high motion area in the image.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows with regards to issue A where claims 40-44 were also Finally Rejected under the written description requirement.

(A) Whether claims 20-25, 31-34, 36, 38, and 40-46 comply with the written description requirement;

(7) Claims Appendix

A substantially correct copy of appealed claims 20-25, 31-34, 36, 38, and 40-46 appears on page A-1 to A-8 of the Appendix to the appellant's brief. The minor errors are as follows: the 6/12/2006 amendments to the independent claims are absent.

Accordingly, claims 20-25, 31-34, 36, 38, and 40-46 are correctly written in the Appendix to the Examiner's Answer.

(8) Evidence Relied Upon

6,754,277	Heinzelman	6-2004

Applicants Admitted Prior Art

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20-25, 31-34, 36, 38, and 40-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' specification defines the foveation point 16 of applicants' system as the focal center of the foveation area 12 which foveation area 12 is defined at page 5 line 3 to page 6 line 18 as being the portion of the image that is determined by the methods discussed at page 5 line 3 to page 6 line 18. The specification describes first defining the foveation area 12 and then based upon the foveation area 12, the foveation center 16 "can be defined as a focal center of the foveated area 12" (applicants specification at page 6 lines 1-2), but, the specification does not describe how the methods discussed at page 5 line 3 to page 6 line 18 will determine the focal point of an eye for the foveated area 12. Thus, applicants' specification does not convey to one of ordinary skill in the art "defining a foveation point in the video image based on a focal point of an eye" as claimed in claims 20, 25, 40, and 45 and does not convey to one of ordinary skill in the art "decoding a

first signal indicative of at least one foveation area around a foveation point in a video image, the foveation point being based on a focal point of an eye" as claimed in claim 46. At the most page 5 line 3 to page 6 line 18 and figures 1 and 1a teach to one of ordinary skill in the art determining the center of the foveation area 12 as foveation point 16. Additionally the specification does not convey first defining the foveation point and second defining the foveation area in proximity to the foveation point as claimed in claims 20, 25, 40, and 45.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 20-25, 31-34, 36, 38, 45 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Heinzelman et al., U.S. Patent No. 6,754,277.

Heinzelman teaches applying greater error protection coding to motion portions of the video and lesser error protection coding to texture portions of the video. Heinzelman teaches determining the foveation point of video by determining the point or points of motion. The foveation area is the area of video forming the moving objects.

A detailed analysis of the claims follows.

Claim 20:

Heinzelman teaches a method for partitioning a video image between a foveated area (*Applicants specification at page 5 line 5 describes the foveation area as an area of motion. Since applicants specification defines foveation point and foveation area as an area having motion activity in the image, then applicants claims claim this. Applicant needs to amend the claims to exclude the means and method that Heinzelman uses to determine the area of motion in order to overcome the rejection. Applicant needs to amend the claims, rather than just presenting arguments directed to additional definitions given by applicant concerning foveation point and area, in order to overcome the rejection.*) and a background area (*The background area is the area of the video that is not a part of the foveation area, the texture includes at least the background.*) comprising the steps of:

defining a foveation point in the video image (*The point of the motion is the foveation point. Inherently the motion was determined and defined to form the motion data.*) based on a focal point of an eye (*Since the specification does not describe how the focal point of the eye will be determined then the point of the motion in the video image corresponds to the claimed focal point of an eye.*);

defining a foveated area in proximity to said foveation point (*The area surrounding the detected motion point is the area. Inherently the area surrounding a motion point was determined and defined to form the motion area.*);

extracting the first plurality of data signals from said video image representing said foveated area (*The encoder extracts the data signals corresponding to the motion data.*);

extracting a second plurality of data signals from said video image representing a background area (*The encoder extracts the data signals corresponding to the texture data.*);

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal (*The encoder encodes the extracted data signals corresponding to the motion data with a first FEC coding.*); and

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal (*The encoder encodes the extracted data signals corresponding to the texture data with a second FEC coding.*), wherein the first error correction protocol comprises a first FEC algorithm (*See column 3 lines 1-5, 21-25, 38-40 and 57-62.*) and a second error correction protocol comprises a second FEC algorithm, the first FEC algorithm being more powerful than the second FEC algorithm (*See column 2 lines 46-50.*).

Claim 21:

Heinzelman teaches the method according to claim 20, wherein the step of defining said foveation point comprises the step of:

pointing a video device at a location of the image using a means for pointing (*To determine the areas of motion inherently a video device was pointed at all of the locations of the image to determine the locations having motion. Thus, this broad claim to pointing is met by determination of motion that was required to form the motion data in Heinzelman. Since applications specification discusses detecting motion then the claimed means for pointing is met by the means for detecting motion used to form the motion data in Heinzelman.*).

Claim 22:

Heinzelman teaches the method according to claim 21, wherein the pointing means comprises at least one of (*Heinzelman teaches at least one of the following because the system used to determine the motion inherently has one of the following computer components.*):

a computer keyboard (*Used by all computer equipment to allow the user to interface with the computer, the keyboard may be directly or indirectly connected to the computer. Inherently when determining the motion in the video a computer input device was used by the operator to direct the system to analyze the*

video with a video device that analyzes the video to determine portions of the video that have motion.);

a computer mouse (*Used by many computer equipment to allow the user to interface with the computer, the mouse may be directly or indirectly connected to the computer. Inherently when determining the motion in the video a computer input device was used by the operator to direct the system to analyze the video with a video device that analyzes the video to determine portions of the video that have motion.*);

a joystick (*Used by many computer equipment to allow the user to interface with the computer, the joystick may be directly or indirectly connected to the computer. Inherently when determining the motion in the video a computer input device was used by the operator to direct the system to analyze the video with a video device that analyzes the video to determine portions of the video that have motion.*), and

an eye tracking device (*Used by many computer equipment to allow the user to interface with the computer, the eye tracker may be directly or indirectly connected to the computer. Inherently when determining the motion in the video a computer input device was used by the operator to direct the system to analyze the*

video with a video device that analyzes the video to determine portions of the video that have motion.).

Claim 23:

Heinzelman teaches the method according to claim 20 further comprising the step of:

calculating a local bandwidth threshold based on said foveation point (*This is a broad term and is met by the inherent motion analysis of the video where a point of motion is determined and a surrounding area is included with the point of motion.*); and

wherein the step of defining said foveation area comprises the steps of:

calculating a local bandwidth for each pixel group in said video image (*The local bandwidth is the pixels having motion corresponding the point of motion.*); and

incorporating those pixel groups having a respective local bandwidth above said local bandwidth threshold into said foveation area (*The area of pixels in the video corresponding to the object having motion have a local bandwidth above a threshold bandwidth corresponding to the background having no motion.*).

Claim 24:

Heinzelman teaches the method according to claim 20 further comprising the steps of:

packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits (*See column 3 line 63 to column 4 line 65. 155 bits is used as the first number.*); and

packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number (*500 bits is used as the second number. Clearly 155 bits is smaller than 500 bits.*).

Claim 25:

Lines 3-11 are identical to lines 3-12 of claim 20. The discussion of lines 3-12 of claim 20 are incorporated by reference. Lines 1-3 and 12-17 of claim 25 will be discussed.

Lines 1-3

Heinzelman teaches a method for the processing of video image data received from a first electronic device (*encoder*), the first electronic device having performed the steps of:

Lines 3-11:

see discussion of claim 20.

Lines 12-17:

the method comprising the steps of:

decoding the first transmitted encoded signal (*the decoder decodes the encoded signal, see column 5 lines 1-3.*);

correcting errors within the first transmitted encoded signal with the use of a high priority processing step to create a received foveated area (*The decoder uses a higher priority processing step to decode the motion data rather than the texture data, column 7 lines 13-16.*);

decoding the second transmitted encoded signal (*The decoder decodes the encoded texture data.*); and

correcting errors within the second transmitted encoded signal with use of a low priority processing step to create a received a background area (*The texture data is decoded with a lower priority step, column 7 lines 13-16.*).

Claim 31:

Heinzelman teaches the method according to claim 20 wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area (*The term high resolution is a broad term and is met by the motion area of the video image.*) of said video image.

Claim 32:

Heinzelman teaches the method according to claim 20 wherein the first plurality of data signals comprises all pixel signals that are included in a high motion area of said video image (*The patent as a whole teaches the first plurality of data signals comprises all pixel signals that are in a high motion area even though a preferred implementation of the system limits the first plurality of data signals to 155 bits.*).

Claim 33:

Heinzelman teaches the method according to claim 20 wherein the first error correction protocol conforms to video communications industry standards H263++ and/or MPEG-4 (*The first FEC and the second FEC error correction protocols conform to H263++ and/or MPEG-4. See column 1 line 41, column 2 line 36.*).

Claim 34:

Heinzelman teaches the method according to claim 20 wherein the second error correction protocol conforms to video communications industry standards H263++ and/or MPEG-4 (*The first FEC and the second FEC error correction protocols conform to H263++ and/or MPEG-4. See column 1 line 41, column 2 line 36.*).

Claim 36:

Heinzelman teaches the method according to claim 20 further comprising the steps of:

transmitting the first encoded signal (*The motion data is transmitted first.*); and

transmitting a second encoded signal at a predetermined time after the transmitting of said first encoded signal (*The texture data is transmitted after the motion data, thus, the texture data is transmitted after a predetermined time after the motion data is transmitted.*).

Claim 38:

Heinzelman teaches the method according to claim 25 further comprising the step of:

combining the received foveated area and the received background area to create the video image data (*See column 5 lines 1-4 which describes receiving the encoded motion and texture areas and reconstructing the video to display or store the video.*).

Claim 45:

Claim 45 is broader than claim 20 because it claims less limitations than claim 20 claims. Lines 1-12 of claim 20 corresponds to claim 45. The difference between claim 45 and claim 20 is claim 20 further claimed a specific type of error correction protocol, FEC. Thus, the discussion of lines 1-12 of claim 20 apply to this claim. Further discussion of this claim is not necessary.

Claim 46:

Lines 12-17 of claim 25 corresponds to this claim. The discussion of lines 12-17 of claim 25 as well as lines 1-12 apply to this claim. Further discussion of this claim is not necessary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinzelman et al., U.S. Patent No. 6,754,277, in view of applicant's admission of the prior art at page 8 lines 5-13.

Claim 40 corresponds to claim 20. The discussion of claim 20 and Heinzelman applies here. The only difference is claim 20 claims FEC error correction protocol while claim 40 claims ARQ error correction protocol.

Heinzelman does not appear to discuss ARQ error correction protocol.

Heinzelman discusses using FEC at column 3 lines 21-24 as "one method of adding error protection". Thus, Heinzelman suggests that other well known error protection protocols may be used.

Applicant at page 8 lines 5-13 states:

Since all communication channels are lossy, that is, they introduce errors or packet losses and delays, conventional communications protocols rely on either forward error correction (FEC) or automatic repeat request (ARQ), or both, for data error correction. In FEC techniques, a damaged message is rebuilt by detective and corrective errors in the bitstream based on an additionally transmitted code word, while in ARQ, damaged message packets are retransmitted based on a Acknowledge/NotAcknowledge (ACK/NAK) feedback signal from the receiving station. Both protocols consume additional delay and overhead in order to be robust to poor channel conditions.

It would have been obvious to one of ordinary skill in the art to use ARQ in Heinzelman because in Heinzelman FEC is one example given by Heinzelman as one method of adding error protection, column 3 lines 21-22, other methods are suggested by this statement and since applicant admits that ARQ or FEC or both are commonly used for error protection and since Heinzelman and Applicant are concerned with having the highest error protection that a wireless system will allow.

Claims 41-44:

These dependent claims correspond directly to dependent claims 21-24 and the discussion of claims 21-24 apply to these claims. Further discussion of these claims are not necessary.

(10) Response to Argument

A. Legal Standards

Appellant introduction refers to various written description, anticipation and obvious court cases.

B. Claims 20-25, 31-34, 36, 38, and 40-46 fail to comply with the written description requirement.

Appellant's arguments concerning the 35 USC 112 first paragraph rejection have been fully considered but they are not persuasive because the specification does not describe defining the focal point of the eye. The specification describes defining a foveation area, see page 5 line 2 to page 6 line 8, but does not describe determining the focal point of the eye. Determining the focal point of the eye requires processes different than applicant described at page 3 lines 15-18 and page 5 line 2 to page 6 line 8. Even the procedure discussed at page 5 line 7 "simply be determined manually by the viewer" only conveys the viewer defines an "image area" and does not convey the

viewer has "based on a focal point of an eye" defined an "image area". The process described by appellant's specification defines an area 12 of the image which area has a center 16 but the process described by appellant's specification and conveyed to one of ordinary skill in the art does not determine the focal point of the viewer's eye or any eye. Appellant argues in the last five lines of page 7 of the Brief that "the techniques described in the specification are well known techniques for defining foveation points and foveation area in images based on the focal point of an eye" and gives various examples in the last three lines on page 7 of the Brief and lines 1-3 on page 8 of the Brief. However, the techniques discussed in appellants specification including motion at page 5 lines 4-7, which discusses determining the foveation area 12 in the image 10 by visually detecting a high motion activity area in the image, do not necessarily determine the focal point of viewer's eye or any eye. The foveation area determined by appellants "well known techniques" will determine an area that may be the focal point of an eye but then these techniques may equally determine an area that may not be the focal point of an eye. Appellant then argues at lines 3-6 on page 8 of the Brief that an article also "describes defining foveation points and foveated areas based upon the focal point of an eye". This argument is not persuasive because this article was not incorporated by reference and because an article cannot be incorporated by reference to support essential material. MPEP 608.01(p) and 37 CFR 1.57. Appellant then argues at lines 6-8 on page 8 of the Brief that the Examiner has provided no evidence in support of his allegation, however, one of ordinary skill in the art will recognize that determining a foveation area 12 in image 10 does not necessarily determine the focal point of an eye

when appellants "well known techniques" are used to determine the foveation area. Thus, appellants contention that appellants specification reasonably conveys to the artisan numerous techniques for defining a foveation point in a video image based on a focal point of an eye is not persuasive since all claim interpretations of "based on a focal point of an eye" is not supported by applicants specification such as a foveation point directly corresponding to a focal point of an eye. MPEP 2163.05 and 2163.05 II. at page 2100-183 Eighth Edition, Rev. 5, Aug. 2006. Automotive Technologies International Inc. v. BMW of North America Inc., 84 USPQ2d 1108 (Fed. Cir. 2007) (A claim covering at least one non-enabled embodiment and at least one enabled embodiment held invalid under 35 USC 112 first paragraph.). LizardTech Inc. v. Earth Resource Mapping Inc., 76 USPQ2d 1724 (Fed. Cir. 2005) and LizardTech Inc. v. Earth Resource Mapping Inc., 77 USPQ2d 1391 (Fed. Cir. 2006) (Claims covering at least one non-conveyed embodiment and at least one conveyed embodiment held invalid under 35 USC 112 first paragraph.). MPEP 2164.08 at page 2100-203 to 2100-205 Eighth Edition, Rev. 5, Aug. 2006 which rationale applies to written description. Note page 2100-204:

> When analyzing the enabled scope of a claim, the teachings of the specification must not be ignored because claims are to be given their broadest reasonable interpretation that is consistent with the specification. "That claims are interpreted in light of the specification does not mean that everything in the specification must be read into the claims." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957, 220 USPQ 592, 597 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984).
>
> The record must be clear so that the public will have notice as to the patentee's scope of protection when the patent issues. If a reasonable interpretation of the claim is broader than the description in the specification, it is necessary for the examiner to make

sure the full scope of the claim is enabled. Limitations and examples in the specification do not generally limit what is covered by the claims.

For at least the reasons given above the Examiner respectfully submits that appellant's specification fails to convey that applicant had possession of the pending claims at the time the application was filed.

C. Claims 20-25, 31-34, 36, 38, 45, and 46 are anticipated by Heinzelman.

Appellants argues at page 9 lines 5-7 of the Brief "Thus, independent claims 20, 25, and 45 set forth, among other things, defining at least one foveation point in a video image and defining at least one foveated area in proximity to the foveation point." which is not persuasive to overcome Heinzelman since the order of the steps is not set forth in the claim and since the specification sets forth determining a foveation area 12 which has a point 16 at page 5 line 14 to page 6 line 8. Since the order of the steps are not claimed and since the specification defines determining the foveation area 12 before determining foveation point 16 then Heinzelman's area of motion corresponding to foveation area 12 having a point corresponding to point 16 meets the argued claim limitation. Interactive Gift Express Inc. v. Compuserve Inc., 59 USPQ2d 1401, 1416-1417 (Fed. Cir. 2001).

2.
We now address the district court's rationale for finding that at least the first and fourth steps of claim 1 must be performed in order. The district court relies on the fact that "step four does not provide for the transmission from the ICM to the IMM of the information sought to be reproduced," and reasons from this that the information must be predelivered. Interactive Gift Express, 47 USPQ2d at 1803. We find this logic unpersuasive.

As explained above, there is no reason why the claim needs to be construed to require that the steps be performed in the order written. Further, as explained below, such a construction would not read on the preferred embodiment, and therefore would "rarely, if ever, [be] correct and would require highly persuasive evidentiary support." Vitronics, 90 F.3d at 1583, 39 USPQ2d at 1578; see also Modine Mfg. Co. v. United States Int'l Trade Comm'n, 75 F.3d 1545, 1550, 37 USPQ2d 1609, 1612 (Fed. Cir. 1996) ("[A] claim interpretation that would exclude the inventor's device is rarely the correct interpretation; such an interpretation requires highly persuasive evidentiary support ...."); Hoechst, 78 F.3d at 1581, 38 USPQ2d at 1130 ("We share the district court's view that it is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way.").

In the preferred embodiment, the following sequence of events occurs (the parenthetical notations referring to the sequence of steps recited in exemplary claim 1): (1) the user provides a request reproduction code to the IMM (step two) and the IMM receives it

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(step four); (2) the IMM sends the request reproduction code to the ICM (not claimed); (3) the ICM provides an authorization code to the IMM (step three) and the IMM receives it (step four); and (4) the IMM copies the information onto a material object (step four). As indicated in the parenthetical remarks, the steps of claim 1 are not performed in order by the preferred embodiment. They are not even performed serially in their entirety because part of step four is performed before step three, and part is performed after step three. Thus, if the claim was construed to require that the steps be performed in order, the claim would not read on the preferred embodiment. However, there is no "highly persuasive evidentiary support" for such a result. See Vitronics, 90 F.3d at 1583, 39 USPQ2d at 1578. Indeed, given that the claim itself and the specification both support a construction in which the steps are not performed in order, the appellees have not directed us to any evidentiary support at all.

3.

Thus, because the steps of claim 1 need not be performed in order, claim 1 does not require predelivery and/or prestorage of the information. Accordingly, we hold that claim 1 is not limited to embodiments that pre-store or pre-deliver the information to the IMM, but that it covers real-time transactions in which the requested item of information is transmitted to the IMM at or prior to the time it is requested by the consumer.

Two recent nonprecedential decisions make reference to Interactive Gift.

United States Court of Appeals for the Federal Circuit, 06-1584, WILLIAM C. FRAZIER, FRAZIER INDUSTRIES, INC., and AIRBURST TECHNOLOGY, LLC, Plaintiffs-Appellants, v. LAYNE CHRISTENSEN COMPANY and PROWELL TECHNOLOGIES, LTD., Defendants-Appellees. DECIDED: June 29, 2007, http://www.cafc.uscourts.gov/opinions/06-1584.pdf. See page 6 which states:

> Ordinarily, the steps of a method claim need not be performed in the order in which they are recited. Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1343 (Fed. Cir. 2001).

United States Court of Appeals for the Federal Circuit, 2007-1092, CYBERSETTLE, INC., Plaintiff-Appellee, v. NATIONAL ARBITRATION FORUM, INC., Defendant-Appellant. DECIDED: July 24, 2007, http://www.cafc.uscourts.gov/opinions/07-1092.pdf. See page 11 which states:

> Absent affirmative indication to the contrary, method steps need not be performed in the order in which they are recited. Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1343 (Fed. Cir. 2001).

Appellants argues at page 9 lines 15-17 of the Brief "Claim 46 sets forth decoding a first signal indicative of at least one foveation area around a foveation point in a video image, wherein the first signal is encoded according to a first error correction protocol." Heinzelman's area of motion corresponding to area 12 having a point corresponding to point 16 meets the argued claim limitation.

Appellants arguments on pages 10 and 11 of the Brief have been fully considered but they are not persuasive because appellant's specification discusses determining a foveation area 12 at page 5 line 2 to page 6 line 8 and defines at page 6 lines 1-2 the foveation point 16 as the center of foveation area 12 and describes at page 5 lines 4-7 using motion to detect a foveation area. Heinzelman partitions a video image into motion data and texture data and then provides error protection for the

motion data that is greater than the error protection that is provided for the texture data. Appellant argues at page 10 lines 3-12 of the Brief "that Heinzelman does not explicitly determine a foveation point or a foveation area" and submits "the Examiner is alleging that Heinzelman inherently describes determining a foveation area because Heinzelman describes partitioning a video image into motion data and texture data". The arguments at page 10 lines 3-12 of the Brief are not persuasive because Heinzelman's image area corresponding to motion either explicitly or inherently corresponds to appellant's motion determined foveation area 12 which has a point 16 because appellant's specification has defined an area of motion as a foveation area at page 5 lines 4-7. Appellant's argument in the paragraph spanning pages 10 and 11 of the Brief concern foveation area and area of motion. In the sentence spanning pages 10 to 11 of the Brief and the following sentence appellant argues that "In particular, a moving portion of the image *may not necessarily* correspond to a foveation point and/or foveation area. For example, a stationary object seen against a moving background may correspond to a foveation point and/or foveation area.". This argument is not persuasive because appellant's specification defined one way of determining the foveation area is by "detecting a high motion activity area in an image", see appellant's specification at page 5 lines 4-7 and see MPEP 2111.01IV, and because appellant's argued example "stationary object seen against a moving background" can be considered as an "object seen moving against a background" making the argued stationary object Heinzelman's moving object. Thus, Heinzelman teaches detecting a foveation area by detecting an area having motion. In the first full paragraph on page 11 of the Brief appellant argues

"Heinzelamn also fails to teach or suggest, either explicitly or inherently, defining at least one foveated area in proximity to the foveation point". This paragraph's argument is not persuasive to overcome Heinzelman since the order of the steps is not set forth in the claim and since the specification sets forth determining an area 12 having a point 16 at page 5 line 14 to page 6 line 8. Since the order of the steps are not claimed then Heinzelman's area of motion corresponding to area 12 having a point corresponding to point 16 meets this paragaph's argument. Note the above discussion of Interactive Gift Express Inc. v. Compuserve Inc., 59 USPQ2d 1401, 1416-1417 (Fed. Cir. 2001).

For at least the reasons given above the Examiner respectfully submits that the present invention is anticipated by Heinzelman.

D. Claims 40-44 are obvious over Heinzelman in view of Applicants' Admitted prior Art.

Appellant's claim 40 and claim 20 are nearly identical with the difference being the type of error correction protocol being used to encode the first and second plurality of data signals. Appellants arguments concerning Heinzelman on pages 12 and 13 of the Brief are similar to the arguments presented for claim 20 and are not persuasive for the reasons given above. Additionally appellant at page 12 of the Brief last paragraph addresses the ARQ issue and in the next paragraph at page 13 of the Brief addresses motivation for using an ARQ having a first allowable error threshold for a foveation area and an ARQ having a second allowable error threshold for a different area. Appellant contends that Heinzelman teaches "that video images should be partitioned into motion

data and texture data, regardless of whether or not the motion data and/or the texture data are proximate to a foveation point", page 13 lines 10-12 of the Brief, and contends "that Heinzelman teaches away from defining at least one foveation point in a video image and defining at least one foveated area in proximity to the foveation point", page 13 lines 12-14 of the Brief. This contention is not persuasive because appellant's specification teaches that one way to determine the foveation area is to detect an area of motion, appellant's specification at page 5 lines 4-7. Appellant's further arguments at page 13 lines 14-18 of the Brief are not persuasive because appellant's specification defined one way of determining the foveation area is by "detecting a high motion activity area in an image", see appellant's specification at page 5 lines 4-7 and see MPEP 2111.01IV, and because appellant's argued example "stationary object seen against a moving background" can be considered as an "object seen moving against a background" making the argued stationary object Heinzelman's moving object. Thus, Heinzelman teaches detecting a foveation area by detecting an area having motion.

For at least the reasons given above the Examiner respectfully submits that the present invention is obvious over Heinzelman and the Admitted Prior Art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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CLAIMS APPENDIX

1-19. (Canceled)

20. (Previously Presented) A method for partitioning a video image between a foveated area and a background area comprising the steps of:

defining a foveation point in the video image based on a focal point of an eye;

defining a foveated area in proximity to said foveation point;

extracting the first plurality of data signals from said video image representing said foveated area;

extracting a second plurality of data signals from said video image representing a background area;

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal; and

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal, wherein the first error correction protocol comprises a first FEC algorithm and a second error correction protocol comprises a second FEC algorithm, the first FEC algorithm being more powerful than the second FEC algorithm.

21. (Previously Amended) The method according to claim 20, wherein the step of defining said foveation point comprises the step of:

pointing a video device at a location of the image using a means for pointing.

22. (Previously Presented) The method according to claim 21, wherein the pointing means comprises at least one of: a computer keyboard; a computer mouse; a joystick, and an eye tracking device.

23. (Previously Presented) The method according to claim 20 further comprising the step of:

calculating a local bandwidth threshold based on said foveation point; and

wherein the step of defining said foveation area comprises the steps of:

calculating a local bandwidth for each pixel group in said video image; and

incorporating those pixel groups having a respective local bandwidth above said local bandwidth threshold into said foveation area.

24. (Previously Presented) The method according to claim 20 further comprising the steps of:

packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits; and

packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number.

25. (Previously Presented) A method for the processing of video image data received from a first electronic device, the first electronic device having performed the steps of:

defining a foveation point in a video image based on a focal point of an eye;

defining at least one foveated area around said foveation point;

extracting a first plurality of data signals representing said foveated area;

extracting a second plurality of data signals representing a background area;

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal; and

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal, the method comprising the steps of:

decoding the first transmitted encoded signal;

correcting errors within the first transmitted encoded signal with the use of a high-priority processing step to create a received foveated area;

decoding the second transmitted encoded signal; and

correcting errors within the second transmitted encoded signal with use of a low priority processing step to create a received a background area.

26-30. (Canceled)

31. (Previously Presented) The method according to claim 20 wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area of said video image.

32. (Previously Presented) The method according to claim 20 wherein the first plurality of data signals comprises all pixel signals that are included in a high motion area of said video image.

33. (Previously Presented) The method according to claim 20 wherein the first error correction protocol conforms to video communications industry standards H263++ and/or MPEG-4.

34. (Previously Presented) The method according to claim 20 wherein the second error correction protocol conforms to video communications industry standards H263++ and/or MPEG-4.

35. (Canceled)

36. (Previously Presented) The method according to claim 20 further comprising the steps of:

transmitting the first encoded signal; and

transmitting a second encoded signal at a predetermined time after the transmitting of said first encoded signal.

37. (Canceled)

38. (Previously Presented) The method according to claim 25 further comprising the step of:

combining the received foveated area and the received background area to create the video image data.

39. (Canceled)

40. (Previously Presented) A method for partitioning a video image between a foveated area and a background area comprising the steps of:

defining a foveation point in the video image based on a focal point of an eye;

defining a foveated area in proximity to said foveation point;

extracting a first plurality of data signals from said video image representing said foveated area;

extracting a second plurality of data signals from said video image representing a background area;

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal; and

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal wherein the first error correction protocol comprises a first ARQ communications protocol having a first allowable error threshold associated therewith and the second error correction protocol comprises a second ARQ communications protocol having a second allowable error threshold associated therewith, the first allowable error threshold being lower than the second allowable error threshold.

41. (Previously Presented) The method according to claim 40 wherein the step of defining said foveation point comprises the step of pointing a video device at a location of the image using a means for pointing.

42. (Previously Presented) The method according to claim 41 wherein the pointing means comprises at least one of: a computer keyboard; a computer mouse; a joystick, and an eye tracking device.

43. (Previously Presented) The method according to claim 40 further comprising the step of:

calculating a local bandwidth threshold based on said foveation point; and

wherein the step of defining said foveation area comprises the steps of:

calculating a local bandwidth for each pixel group in said video image; and

incorporating those pixel groups having a respective local bandwidth above said local bandwidth threshold into said foveation area.

44. (Previously Presented) The method according to claim 40 further comprising the steps of:

packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits; and

packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number.

45. (Previously Presented) a method, comprising:

defining a foveation point in a video image based on a focal point of an eye;

defining a foveated area in proximity to the foveation point;

extracting a first plurality of data signals indicative of the foveated area from the video image;

extracting a second plurality of data signals indicative of a background area from the video image;

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal; and

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal.

46. (Previously Presented) A method comprising:

decoding a first signal indicative of at least one foveation area around a foveation point in a video image, the foveation point defined based on a focal point of an eye,wherein the first signal is encoded according to a first error correction protocol;

correcting errors within the first signal using a high-priority processing step to create a received foveated area;

decoding a second signal indicative of a background area in the video image, wherein the second signal is encoded according to a second error correction protocol different from the first error correction protocol; and

correcting errors within the second signal using a low priority processing step to create a received background area.